

September 2001

Lockheed Martin honors AFRL and ASC's Power-by-Wire designers

by 2nd Lt Morgan O'Brien, AFRL Public Affairs

WRIGHT-PATTERSON AFB, Ohio - Eight members of Air Force Research Laboratory (AFRL) and one member of Aeronautical Systems Center (ASC) received awards last Thursday for their part in successful flight tests of the Lockheed Martin AFTI J/IST F-16 for the Joint Strike Fighter program.

United States Marine Corps Maj. Gen. Michael Hough, Director of the Joint Strike Fighter (JSF) Program, honored the group. The presentation, held at the U.S. Air Force Museum Research and Development Hangar, recognized a major advance in aerospace technology. The nine were part of the team with Lockheed Martin to receive Flight International Magazine's 2001 Aerospace Industry Award for Engineering, Maintenance and Modification. In an aviation first, the team flew the manned aircraft with a total electric actuation system, without hydraulic or mechanical backups.

"This is a great achievement for our researchers," said Maj. Gen. Paul Nielsen, AFRL Commander. "They have received this honor due to innovative thinking. The power-by-wire system is not only safer, but also more cost efficient, and use efficient. This is a victory for both productive teamwork and the future of air power."



Honorees and industry alike gathered in front of the AFTI J/IST F-16 during an awards presentation held on Sept. 6 at Wright Patterson, AFB. Pictured from left to right are Dick Deitrich, NAVAIR; Dick Quigley Jr., AFRL (ret.); Maj General Hough, USMC, JSF Program Director; Lt. Col Skip Gresko, JSF Program Office; George Kline, AFRL; Gerald R. Wyen, AFRL; Alan Burkhard, AFRL; Maggie Skujins, AFRL; Mike Griswold, Lockheed Martin Aero; Dave Selegan, AFRL; Doug Wetzal, AFRL; William Kinzig, ASC; Andrew Maack, NAVAIR T&E Engineering; Luis A. Pineiro, AFRL; Dennis Eicke, Lockheed Martin Aero; and Brian Hager, AFRL. (Air Force photo by Vicki Stein)

Continued on page 2

Continued from page 1

The power-by-wire system will reduce aircraft life cycle costs by 13 percent. Fuel costs may also plummet due to a six percent reduction in gross takeoff weight.

“Basic volumetric savings is a huge product of this project,” said Brian Hager, AFRL Propulsion Directorate and J/IST Program Manager. “With our removal of hydraulic pumps, more space is available, making it possible to create a smaller plane, or to add fuel capacity providing additional range.”

Combat survivability is also improved by the removal of hydraulic pumps as the technology will also reduce the use of hydraulic fluids.

The accomplishments resulted from positive teamwork. “The test and evaluation process is all about teamwork, each person brings something special to the table,” said Maggie Skujins, AFRL Operations and Support Directorate and J/IST Flight Test and Evaluation Lead.

Honoree and team leader Dr. Alan Burkhard, AFRL Air Vehicle Directorate and J/IST Team Leader added, “AFRL is strong in pushing and integrating technologies together.”

“This project epitomizes AFRL’s thinking for the future,” remarked Nielsen, “A cohesive team creating efficient solutions that better our aircraft, while they protect our pilots in the air and our people on the ground.”

Honorees From Wright-Patterson include:

Dr. Alan Burkhard- J/IST Team Leader 1997-2001, J/IST Chief Engineer 95-97
AFRL Air Vehicle Directorate, Control Services Division (AFRL/VAC)

Brian Hager- J/IST Program Manager for Lockheed Martin Flight Test Contract, 95-01
AFRL Propulsion Directorate, Aerospace Power Division (AFRL/PRPS)

William Kinzig- J/IST Independent Modification Review (IMR) Team Chairman, 97-01
ASC Air Vehicle Subsystems (ASC/ENFA)

George Kline- J/IST Chief Engineer
AFRL Air Vehicles Directorate, Aeronautical Sciences Division (AFRL/VAA)

Luis A. Pinero- AFTI/F-16 Program Flight Controls Engineer and liaison to J/IST Program 97-01
AFRL Air Vehicles Directorate, Integration and Demonstration Branch (AFRL/VAAI)

Dick Quigley, Jr.- J/IST Team Leader 95-96
Retired, AFRL Propulsion Directorate (AFRL/PR)

Dave Selegan- J/IST configuration Control Board Chairman, Safety Review Chairman, Technical Review Board Chairman,
and Flight Releasing Authority 96-01
Chief of Advanced Development Program Office (AFRL/VA)

Maggie Skujins- J/IST Flight Test and Evaluation Process Lead 96-01
AFRL Operations and Support Directorate (AFRL/DS)

Doug Wetzel- J/IST Flight Test Modification Engineer 96-01, Team Leader for Aircraft Physical Configuration Inspection and Post Modification Acceptance Teams.
AFRL Air Vehicle Directorate, Control Sciences Division (AFRL/VAC)

Gerald R. Wyen- J/IST Program Manager for the Boeing St. Louis Contract, 95-01
AFRL Air Vehicle Directorate, Control Sciences Division (AFRL/VAC). @